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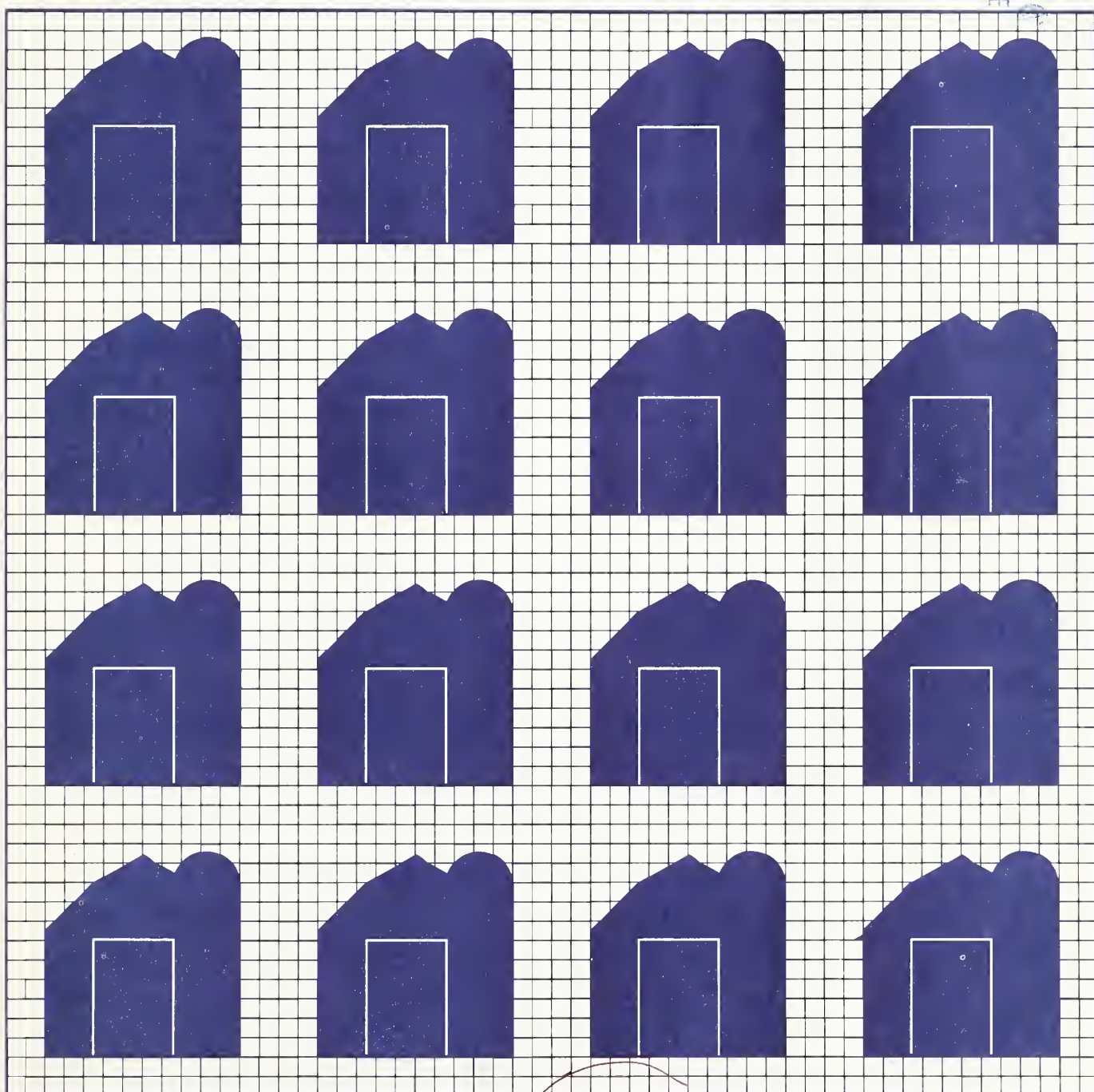
Minifarms

Farm Business or Rural Residence?

Nora L. Brooks

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This publication is a revised version of AIB-480, published September 1984. Revisions to the State data were necessary to correct problems from combining data from different sources. Sampling techniques caused comparability problems for some characteristics between the published Census and the Census Typical Farm Program.

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Abstract

Minifarms—those with less than \$2,500 in farm sales annually—account for about 25 percent of all U.S. farms, almost 2 percent of U.S. harvested cropland, and less than 1 percent of U.S. farm product sales. Minifarms' assets are underused; for example, the value of minifarm land and buildings per dollar of sales is \$64.65, compared with \$2.50 for large farms. Most minifarm operators spend over 200 days a year doing off-farm work, and probably maintain the minifarms primarily as rural residences. Significant off-farm income more than offsets negative farm income on these farms, and total income is higher than for most other farm sales classes. More than 54 percent of all minifarms are in the South, representing a third of all farms in that region.

Keywords: Minifarms, small farms, off-farm work, farm product sales

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Implications of Study

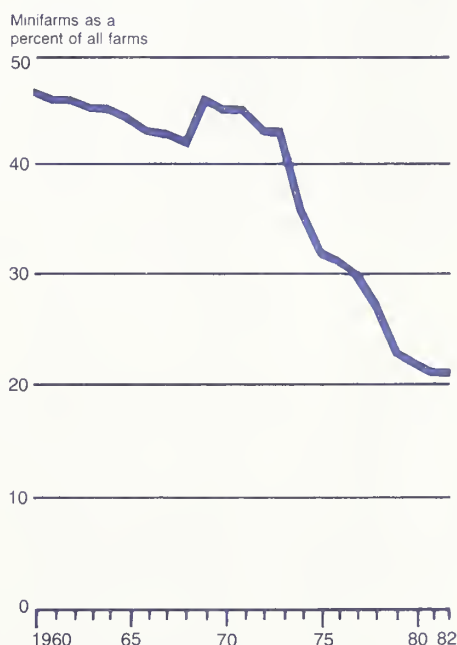
The widely held notion that minifarm operators (those with farm sales of less than \$2,500 a year) are at the low end of the economic scale and need assistance to upgrade their resource base and farming skills in order to earn adequate incomes is not supported by the data in this analysis. The perception of widespread poverty among minifarms and small farms has its roots in the statistical separation of the farm and nonfarm sector. Policy analysts, researchers, and others interested in farm sector welfare thus focus on the farming activities of small-scale farm operators, which provide meager returns, and exclude nonfarm activities, which are substantial.

Another widely held premise is that the overriding goal of small (including minifarm) operators is to expand their farming operations to full-time businesses. Nonfarm income-producing activities are considered a means of temporarily supplementing farm income until the farm business is capable of generating sufficient income to support the operator and family. The evidence, however, shows that minifarms and small farms are primarily rural residences for those retired or employed in nonfarm occupations who harvest some hay or graze some cattle to supplement their incomes.

The characteristics of minifarms in this analysis—high total income, negative net farm income, high proportion of operators with nonfarm occupations, extensive farm resource use, and farm assets heavily weighted toward residential rather than production uses—indicate that these operators are interested in rural living, but not necessarily in farming as an income-generating activity.

If, as this evidence strongly suggests, minifarms and small farms are maintained primarily as rural residences and secondarily as farm businesses, then programs aimed at improving their operators' farming skills are unlikely to be effective. Commodity support policies, resource conservation policies, and delivery of services to rural areas are all influenced by the perception that the well-being of small farms and minifarms depends on their farming activities. Minifarmers, in fact, are a relatively affluent group, and derive a substantial portion of their income from nonfarm sources. This does not imply that there are no minifarms or small farms with income problems or in need of assistance. It does mean that broad programs will likely be ineffective in reaching the people on those farms needing help. Assistance programs targeted to specific circumstances and needs may be a more effective and less costly approach.

The Decline In Minifarms Has Slowed In Recent Years



Minifarms: Farm Business or Rural Residence?

Nora L. Brooks

Introduction

The number of small farms in the United States (those with less than \$20,000 in annual farm product sales) has fallen for over half a century. In the last decade, however, the rate of decline has slowed. Small farms account for a large number of farms (972,510 in 1978) but for only a small percentage of farm product sales and land in farms. Small farms may not compete with larger farms for resources or market shares, but they are an important part of the total rural infrastructure in areas of few or declining farm numbers.

This report examines a subset of small farms, called minifarms. Such a farm has annual sales of agricultural products of less than \$2,500. These farms accounted for 24.7 percent of all U.S. farms in 1978. The major purposes of this report are (1) to develop a profile of minifarms with respect to their agricultural production, farm asset holdings, resource use, and sociodemographic characteristics; and (2) to describe the role of minifarms in the U.S. farm sector and in rural communities. An objective of the study is to shed light on the reasons minifarms exist: are they low-income subsistence farms, are they beginning farmers attempting to become established in an agricultural career with the goal of eventual expansion, or do they represent a transition of resources out of farming into rural residential use?

Minifarms in six States were examined based on data from the 1978 Census of Agriculture.¹ While comparisons with previous censuses would have been useful, definition changes adopted in 1974 and changes in data collection in 1978 make the data not strictly comparable. The changes directly affect the minifarm category. Thus, most of the analysis is limited to 1978 data, not available until July 1981. Additional data were ob-

tained from *Economic Indicators of the Farm Sector* to show recent changes in income per farm household.² Since this study is the first to look at the minifarm category as a distinct sales class, 1978 will be considered the benchmark for future studies.

Individual State data were developed directly from tapes of the 1978 Census using the Census Typical Farm Program developed by Hatch, facilitating access to greater detail than normally found in the general tabulations of the Census of Agriculture.³ Thus, State data presented here may vary slightly from published Census volumes.

Minifarms in Perspective

Any study of U.S. minifarms—those with less than \$2,500 of annual agricultural product sales—requires a comparison with larger farms. This study defines three U.S. farm sales classes. Besides minifarms, a distinct sales class for purposes of this study, there are the small farm sales class, those with \$2,500-\$19,999 in annual agricultural product sales, and the large farm sales class, with \$20,000 or more in annual agricultural product sales (table 1).

Profile of Small Farms

Small farms represented 39 percent of all U.S. farms, 17 percent of the land in farms, almost 19 percent of the value of land and buildings, and almost 19 percent of all farm machinery and equipment (table 2). Most small farm operators were full owners of their land and sole proprietors; only 8 percent were part owners, while 5 percent were tenants. Most small farmers owned the land they operated and lived on their

¹U.S. Department of Commerce, Bureau of the Census, *1978 Census of Agriculture*, July 1981.

²U.S. Department of Agriculture, Economic Research Service, *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics*, 1982, ECIFS 2-2, Oct. 1983.

³Thomas C. Hatch, "The Census Typical Farm Program User Guide and Documentation," U.S. Dept. Agr., Econ. Res. Serv., ERS Staff Report No. AGES811230, Feb. 1982.

MINIFARMS VS. SMALL FARMS

	<i>Mini-farms</i>	<i>Small farms</i>
Annual agricultural products sales	0-\$2,499	\$2,500-\$19,999
Number of farms	611,653	972,510
Percentage of all U.S. farms	24.7	39
Percentage of all U.S. land in farms	4.5	17.2
Percentage of all agricultural products sold	0.6	7.4
Most common crop grown	Hay	Hay
Most common livestock raised	Cattle and calves	Cattle and calves
Percentage sole proprietorship	94.3	90.2

farms, but they also worked off the farm more than 100 days per year.

Small farms grew about the same commodities as did minifarms. The major livestock was cattle and calves, and the major crop was hay, with almost half of all small farms growing hay. Cattle, the majority of which were beef, were raised on almost 60 percent of all small farms. Small cattle operations also accounted for 23 percent of all farms in the United States. Chickens were raised on 12 percent of all small farms. Hogs and pigs were the next largest type of livestock operation for small farms, but they represented only 7 percent of all farms, and 17 percent of small farms.

Corn was the second major small farm crop, with 41 percent growing corn, but these farms represented only 12 percent of all U.S. farms. About 5 percent of small farms had orchards. Farms whose primary crop was orchards tended to be much smaller than most. For small wheat farms, the average acreage was larger than for corn: about 60 acres per farm. However, only 13 percent of small farms produced wheat. Tobacco farms accounted for 12 percent of all small farms, although the size of their operation was much smaller, averaging under 3 acres per farm.

Market value of agricultural products sold on small farms averaged about \$8,000. These farms accounted for about 7 percent of all U.S. farm product sales.

Table 1—Selected characteristics of U.S. farms, by sales class

Characteristic	Unit	Average per farm in sales class—		
		Mini ¹	Small ²	Large ³
Farms	Number	611,653	972,510	892,177
Total acres	Acres	76.6	182.0	840.5
Cropland harvested	do.	10.1	46.2	301.5
Hay harvested	do.	6.4	15.6	47.6
Cattle inventory	Head	7.5	20.0	91.0
Chicken inventory	do.	6.2	7.9	388.6
Total sales	Dollars	1,152.4	8,203.0	111,173.3
Cattle sales	do.	542.3	2,869.6	29,915.7
Operating expenses: ⁴	do.	1,453.8	4,601.8	61,638.7
Energy ⁵	do.	268.3	876.9	5,704.9
Livestock ⁶	do.	694.4	1,767.3	34,433.7
Crop ⁷	do.	276.8	1,273.0	11,780.2
Labor ⁸	do.	214.3	684.6	9,719.9

See footnotes at end of table.

Continued—

Table 1—Selected characteristics of U.S. farms, by sales class—Continued

Characteristic	Unit	Average per farm in sales class—		
		Mini ¹	Small ²	Large ³
Value of land and buildings:				
Owned	do.	69,867.3	99,074.1	309,537.3
Rented in	do.	15,493.6	8,169.9	186,710.9
Rented out	do.	10,718.8	2,776.3	14,813.7
Operated	do.	74,642.1	104,467.7	481,434.5
Acres owned	Acres	71.7	144.6	488.9
Acres rented in	do.	15.9	56.5	381.9
Acres rented out	do.	11.0	19.2	30.3
Value of machinery and equipment	Dollars	7,088.9	15,301.0	67,277.0
Cars	Number	.6	.9	1.2
Trucks	do.	.9	1.1	2.2
Farm machines	do.	1.3	2.5	5.2
Average age of operator	Years	50.7	51.8	48.3
Days of off-farm work:				
None	Farmers	146,123	310,212	543,749
1–99	do.	41,733	92,240	129,946
100–199	do.	52,694	93,203	49,714
200 or more	do.	356,947	430,209	117,245
Cropland harvested as percentage of cropland	Percent	31.5	52.5	75.7
Cropland harvested as percentage of total acres	do.	13.2	25.4	35.9
Crop sales per acre of cropland harvested	Dollars	41.24	89.04	164.67
Crop sales per acre of land in farms	do.	5.45	22.59	59.07
Sales per dollar of asset value	Cents	1.41	5.86	18.55
Total sales per acre	Dollars	15.04	45.07	132.27
Crop sales as percentage of total sales	Percent	36.2	50.1	44.7
Livestock sales as percentage of total sales	do.	63.8	49.9	55.3
Value of land and buildings per dollar of sales	Dollars	64.77	15.20	4.79
Value of land and buildings per acre	do.	974.44	685.16	633.13
Value of machinery and equipment per dollar of sales	do.	6.15	1.86	.60
Value of machinery and equipment per acre	do.	92.55	84.08	80.04
Total operating expenses per dollar of sales	do.	1.26	.56	.55
Operators working days off-farm as percentage of all operators:				
None	Percent	23.9	31.9	60.9
1–99	do.	6.8	9.5	14.6
100–199	do.	8.6	9.6	5.6
200 or more	do.	58.4	44.2	13.1

¹Less than \$2,500 gross annual farm product sales.²\$2,500–\$19,999 gross annual farm product sales.³\$20,000 or more gross annual farm product sales.⁴Sum of energy, livestock, crop, and labor expenses.⁵Includes gasoline for the farm business; diesel fuel for the farm business; LP gas, butane, propane for the farm business; fuel oil for the farm business; natural gas for the farm business; kerosene, motor oil, grease for the farm business; electricity for the farm business; and other (coal, wood, coke, etc.).⁶Includes livestock and poultry purchased, total feed purchased for livestock and poultry, and animal health costs for livestock and poultry.⁷Includes seeds, bulbs, plants, trees, and fertilizer purchased—all forms, including rock phosphate and gypsum; and agricultural chemicals purchased—insecticides, herbicides, fungicides, other pesticides, lime, etc.⁸Includes hired labor, machinery hire, customwork, and contract labor.

Table 2—Selected characteristics of small farms

Item	Small farms	Percentage of all farms	Percentage of all small farms
	<i>Number</i>	<i>Percent</i>	
Farms	972,510	39.2	100.0
Land in farms (acres)	176,984,158	17.2	100.0
Cropland harvested (acres)	44,906,059	14.0	100.0
Value of land and buildings (\$1,000)	120,065,135	18.5	100.0
Value of machinery and equipment (\$1,000)	14,880,339	18.7	100.0
Value of farm product sales (\$1,000)	7,977,520	7.4	100.0
Tenure of operator:			
Full owner	642,355	25.9	66.0
Part owner	206,360	8.3	21.2
Tenant	123,795	5.0	12.7
Form of organization:			
Sole proprietorship	876,849	35.4	90.2
Partnership	84,622	3.4	8.7
Corporation	11,039	.4	1.1
Days of off-farm work:			
None	310,212	12.5	31.9
1-99	92,240	3.7	9.5
100-199	93,203	3.8	9.6
200 or more	430,209	17.4	44.2
Operator residence on farm	656,253	26.5	67.5
Average age of operator (years)	51.8	—	—

—=Not applicable.

Profile of Large Farms

Large farms in this study are defined as having \$20,000 or more annual farm product sales, although they are traditionally defined as having \$100,000 or more sales. Although large farms represented only 36 percent of all U.S. farms, they held 73 percent of the land in all farms, 73 percent of the value of land and buildings, and 76 percent of the value of machinery and equipment. They also sold 92 percent of all U.S. farm products. Almost half the large farm operators were part owners, while over one-third were full owners. As with the other sales classes, the majority of large farms were sole proprietorships. In contrast to small and minifarms, most large farm operators reported no off-farm work. Most lived on their farms and considered farming their principal occupation.

Large farms sold slightly more livestock than crops, although there were more crop farms than livestock farms. The primary crop raised was cash grain; roughly one-third of these cash grain farms had more than \$40,000 in annual sales. There were three major classes of livestock raised by these large farms: cattle, hogs, and dairy cattle. Market value of agricultural products sold on large farms averaged \$111,000. Operating expenses were 55 percent of sales; the largest expense was livestock purchases.

Profile of Minifarms

Approximately 25 percent of all U.S. farms in 1978 were minifarms (table 3). These farms operated less than 5 percent of all land in farms, harvested 2 percent of all harvested cropland, held 7 percent of the value of land and buildings, and accounted for almost 6 percent of the value of machinery and equipment. Yet minifarms sold less than 1 percent of all agricultural products sold.

Minifarms had basically the same tenure and organizational patterns as other U.S. farms. Nearly 80 percent of minifarm operators owned all the land they farmed, 12 percent were part owners, and the remaining 8 percent were tenant farmers.⁴ Operators in other sales classes were less likely to own the land they farmed. Slightly over half the operators were full owners, about one-third were part owners, and less than one-tenth were tenants.

Slightly over half of minifarm operators reported 200 or more days of off-farm work. About one-fourth of the operators spent no time in off-farm work, while there were almost equal numbers with 1-99 days and 100-199 days of off-farm work.

Almost all minifarms (94 percent) were sole proprietor or family farms. Partnerships claimed almost all the remaining farms. Farms in the large and small farm sales classes did not differ from minifarms in form of organization as much as in tenure. Sole proprietorships in the large and small farm sales classes combined ac-

⁴Census defines full owners as owning all their land, part owners as owning part of their land and renting in the rest, and tenants as renting all their land.

counted for 86 percent, partnerships for 12 percent, and corporations and cooperative farms for the rest.

Minifarms sold about \$950 million in agricultural products in 1978, an average of \$1,547 per farm. Average operating expenses for minifarms were \$1,454 per farm, leaving little cash farm income for the operator.

Minifarms sold five major crops: hay, corn, fruits, tobacco, and wheat. Crops are listed according to the number of farms growing that crop (table 4). Though not the only crops grown by minifarms, these crops were grown in each State studied, thus simplifying the comparisons among States.

The most important type of livestock raised by minifarms was cattle and calves, primarily beef cows (table 5). Hogs and pigs were almost as important as chickens in terms of farm numbers. Farms raising sheep and lambs represented only about 4 percent of all minifarms, but accounted for more farms than did minifarms raising wheat.

Comparisons of the Three Farm Classes

Available data on minifarms seem to indicate that minifarm operators are more interested in rural living than in farming as a business. Profiles of minifarms depict a very extensive type of agriculture, an apparent underutilization of farm resources, and generally negative net returns. These characteristics of minifarms, and to a lesser extent small farms in general, have led to numerous efforts to upgrade the farming skills and practices of their operators. Such efforts have generally been based on the premise that improved farming skills would allow these operators to increase their income levels and well-being. As the characteristics of minifarms have become better understood, a rural lifestyle rather than farming for profit is increasingly seen as the overriding reason for minifarms' existence.

Enterprise and Land Use Patterns

Comparisons of enterprise and land use patterns between the three sales classes show that there are large differences in cropping patterns (see table 1). Minifarms harvest about one-third of their cropland, small farms harvest over half, and large farms harvest

Table 3—Selected characteristics of minifarms

Item	Minifarms	Percentage of all farms	Percentage of all minifarms
		Number	Percent
Farms	611,653	24.7	100.0
Land in farms (acres)	46,850,548	4.5	100.0
Cropland harvested (acres)	6,186,912	1.9	100.0
Value of land and buildings (\$1,000)	45,653,185	7.0	100.0
Value of machinery and equipment (\$1,000)	4,335,961	5.5	100.0
Value of farm product sales (\$1,000)	704,856	.6	100.0
Tenure of operator:			
Full owner	487,748	33.6	79.7
Part owner	73,402	10.3	12.0
Tenant	50,503	16.1	8.3
Form of organization:			
Sole proprietorship	576,572	26.5	94.3
Partnership	31,602	13.1	5.2
Corporation	1,586	3.1	.3
Days of off-farm work:			
None	146,123	14.6	23.9
1-99	41,733	15.8	6.8
100-199	52,654	26.9	8.6
200 or more	356,947	39.4	58.4
Operator residence on farm	445,976	25.0	72.9
Average age of operator (years)	50.7	—	—

—=Not applicable.

Table 4—Major crops raised on minifarms

Crop	Minifarms	Percentage of minifarms	Acres	Percentage of total U.S. acres ¹
		Number	Thousands	Percent
Hay	234,173	38.1	4,103	4.0
Corn	97,845	15.9	912	.9
Orchards	52,269	8.5	334	.3
Tobacco	37,791	6.2	133	.1
Wheat	16,155	2.6	331	.3

¹Land in all farms.

three-quarters. Hay is the principal crop produced on minifarms and small farms, while large farms tend toward cash grain. Of harvested cropland, minifarms harvest 60 percent in hay; small farms, 34 percent in hay; and large farms, 16 percent in hay. In contrast,

minifarms have only 10 percent in cash grains, small farms have 34 percent in cash grains, and large farms have 59 percent in cash grains.

Livestock types followed the same pattern for the three classes. All three classes raised cattle, but both small and minifarms raised beef cattle, while large farms included a substantial number of dairy herds. Minifarms raised 6 percent of U.S. beef cattle, small farms raised 29 percent, and large farms raised 65 percent. In con-

trast, 93 percent of all dairy cattle were raised on large farms while small and minifarms had 6 and 1 percent, respectively.

The intensity of resource use differs significantly between the three classes of farms. In general, resource use is most intense on large farms and least intense on minifarms. This implies that minifarm operators, for various reasons, have little interest in engaging in more intensive agriculture, and that much of the agricultural land resources they control are underutilized.

Table 5—Major livestock types raised on minifarms

Livestock	Minifarms	Percentage of minifarms	Head	Average head per farm
	<i>Number</i>	<i>Percent</i>	<i>Thousands</i>	<i>Number</i>
Cattle and calves	347,775	56.6	5,094	15
Beef cows	264,900	43.1	2,449	9
Chickens	130,923	21.3	4,704	36
Hogs and pigs	116,378	19.0	1,530	13
Sheep and lambs	23,627	3.8	868	37

Table 6—Value of owned assets per acre and per dollar of sales, by farm size

Item	Mini	Small	Large
	<i>Dollars</i>		
Land and buildings:			
Value per acre	1,040.00	602.00	386.00
Value per dollar of sales	64.65	12.38	2.50
Buildings:			
Value per acre	420.00	161.00	66.00
Value per dollar of sales	26.14	3.31	.43

Table 7—Value of assets per farm, by farm size

Item	Mini	Small	Large
	<i>Dollars</i>		
Assets owned by operator	104,817	200,991	523,248
Farm physical assets	78,088	166,899	466,712
Farm financial assets	15,254	20,652	36,729
Nonfarm assets	11,475	13,440	19,807

Composition of Assets

The value of assets owned by minifarm operators averaged about half that of small farm operators and one-fifth that of large farm operators. The value of owned assets per acre, however, was considerably higher on minifarms than on small and large farms. Minifarm operators also had much higher asset values per dollar of sales than small and large farm operators (table 6).

Composition of assets owned and operated among the three classes of farms also differ significantly. Minifarm operators hold a higher proportion of their total assets in financial and nonfarm assets than do small and large farm operators. About 15 percent of minifarm assets were financial assets in 1978, compared with 10 percent of small farm assets and 7 percent of large farm assets. Farm financial assets are deposits, securities, cash value of life insurance, accounts receivable, and cash on hand. About 11 percent of assets owned by minifarm operators were nonfarm assets, while small and large farms held 7 and 4 percent, respectively, of their assets in nonfarm assets (table 7).

Farm physical assets, which include land and buildings, machinery and equipment, and livestock and crop inventories, accounted for 77 percent of the assets on minifarms. The comparable figures for small and large farms were 83 and 89 percent. Thirty percent of the farm physical assets owned by minifarm operators is in dwellings. Dwellings account for only 12 percent of farm physical assets owned by small farm operators and 6 percent of farm physical assets owned by large farm operators (table 8).

Minifarm operators own a larger percentage of their resources than do either small or large farm operators. Minifarm operators in 1978 owned 92 percent of the

value of land and buildings operated, and rented 8 percent. Small farm operators owned 79 percent of land and buildings operated, while only 55 percent of the land and buildings on large farms were owned by the operator (table 9).

Sources of Income

The sources of income for minifarm and small farm operators are similar. Both rely on nonfarm income sources to cover their living costs and to offset farm losses. The primary difference is that minifarm operator families have consistently higher nonfarm and total incomes than do small farm operator families (table 10). In contrast, operators of larger farms earn most of their income from farming, although off-farm income has recently become more important to large farms.

There are also differences in the source of nonfarm income among the three farm categories. Data from the Census 1979 Farm Finance Survey indicate that minifarm operators receive over 75 percent of their nonfarm income from cash wages, while small farm operators receive 70 percent and large farm operators 55 percent of their nonfarm income from cash wages (table 11). Large farm operators receive a much higher proportion of their nonfarm income from investments and nonfarm businesses and professions than do minifarm and small farm operators.

Considering income from all sources, minifarm operators have higher incomes than all categories of farm operators except those in the \$100,000 and over sales

Table 8—Values of farm physical assets, by farm size

Item	Mini	Small	Large
<i>Dollars</i>			
Farm physical assets	78,088	166,899	466,712
Value of land	40,569	71,072	262,721
Value of buildings	27,547	25,962	54,675
Dwellings	23,760	20,037	27,940
Other buildings	3,787	5,924	26,735
Value of machinery and equipment	7,209	12,199	62,234
Value of crop inventory	122	777	14,367
Value of livestock inventory	2,640	6,889	43,455

Table 9—Value of owned and rented land and buildings, by farm size

Item	Mini	Small	Large
<i>Dollars</i>			
All land and buildings	74,231	122,479	576,777
Owned	68,166	97,034	317,396
Rented	6,115	25,445	259,381

Table 10—Income per farm household

Item	Mini	Small	Large
<i>Dollars</i>			
Net farm income:			
1978	-712	344	31,708
1979	-593	-75	30,091
1980	-575	-542	28,992
1981	-613	-1,101	24,754
1982	-466	-878	25,891
Off-farm income:			
1978	15,131	13,401	8,610
1979	18,234	16,302	10,391
1980	19,666	17,569	11,172
1981	20,793	18,577	11,817
1982	20,744	18,647	12,048
Total income, farm and nonfarm sources:			
1978	14,419	13,746	40,317
1979	17,639	16,227	40,482
1980	19,091	17,028	40,162
1981	20,180	17,477	36,570
1982	20,278	17,769	37,939

Source: *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1982*, ECIFS 2-2, U.S. Dept. Agr., Econ. Res. Serv., Oct. 1983.

Table 11—Off-farm income, by source

Item	Mini	Small	Large
<i>Dollars</i>			
Percent of off-farm income from:			
Cash wages	76.9	70.2	55.5
Retirement	9.4	10.0	6.2
Interest and dividends	5.1	8.5	20.2
Estates	1.6	2.5	6.7
Business and professionals	6.6	8.7	11.2

classes—the largest commercial farms which account for about 12 percent of all farms. The average family income of minifarm operators approaches the U.S. median family income, \$22,388 in 1982.

Geographic Distribution of Minifarms

This study divides the United States in four regions—South, North Central, Northeast, and West—in order to evaluate regional variations in concentration and characteristics of minifarms.

South

Over half of all minifarms were in the South, representing about one-third of all farms in this region. Only 78 percent of the minifarm operators in the South were full owners. Less than 14 percent of the operators were part owners, while 9 percent were tenant operators (table 12).

Sole proprietorships claimed 94.3 percent of the South's minifarm operators, with partnerships and corporations taking 5.1 and 0.2 percent, respectively. This region had only 25 percent of the land in all minifarms, while these minifarms had only 9 percent of all farmland in the South.

Slightly less than 25 percent of the minifarm operators in the region claimed farming as their principal occupation. Most of the minifarm operators in the South either did not work off the farm at all or worked more than 200 days.

As with minifarms nationally, most minifarms in the South were primarily livestock farms. Livestock was sold by about two-thirds of all minifarms in the region, and about one-fifth of all farms in the region. Minifarms with crop sales accounted for roughly one-tenth of all farms in the South, and about one-third of all the South's minifarms.

Despite their large numbers, these farms contributed very little to the total value of the South's farm product sales in 1978. Minifarms accounted for only 1.4 percent of all farm product sales in the region, about 1 percent of all crop sales, and 1.7 percent of all livestock sales.

North Central

The North Central region had the second highest number of minifarms, with about 25 percent of all U.S. minifarms. About 15 percent of all farms there were in the minifarm category. The North Central region held about 17 percent of all land in minifarms. Most North Central minifarm operators (almost 83 percent) were full owners of their farms. Form of organization varied only slightly from the South: 94 percent of the minifarms in the North Central region were sole proprietorships, 5 percent were partnerships, and 0.3 percent were corporations.

Table 12—Selected characteristics of minifarms as a percentage of all farms in region

Characteristic	South	North Central	Northeast	West
<i>Percent</i>				
Farm numbers	32.7	15.0	30.0	29.1
Farms selling crops	10.2	6.8	13.7	8.9
Farms selling livestock	22.2	8.6	16.7	17.6
Land in farms	8.6	4.7	14.2	17.0
Market value of farm products sold ¹	1.4	.5	1.2	.8
Crops sold ²	1.0	.5	1.5	.5
Livestock sold ²	1.7	.6	1.1	1.1
All minifarms in region—				
Tenure: ³				
Full owner	77.7	82.8	81.0	81.2
Part owner	13.6	8.9	13.2	10.9
Tenant	8.6	8.3	5.9	7.9
Organization: ³				
Sole proprietorship	94.3	94.0	94.9	91.9
Partnership	5.1	5.2	3.8	6.1
Corporation	.2	.3	1.0	1.0
Principal occupation:				
Farming	23.5	20.6	21.4	20.8
Other than farming	76.5	79.4	78.6	79.2
Days of off-farm work: ³				
None	26.6	21.1	22.2	20.0
1–99	7.2	6.0	6.4	7.1
100–199	8.1	8.4	10.4	9.9
200 or more	55.5	62.2	59.2	61.3

¹Percentage of all farm sales in region.

²Percentage of all farm sales in region derived from that commodity.

³May not add to 100 percent, due to rounding.

Only 20 percent of the North Central minifarm operators considered farming their primary occupation. Thus, the largest group of minifarm operators worked off the farm 200 days or more.

North Central minifarms contributed a negligible amount (0.5 percent) to the market value of all farm product sales in the region. The proportions of both livestock and crop sales were about equal to the minifarm proportion of all farm sales. More North Central minifarms sold livestock than crops, accounting for 9 percent and 7 percent of all farms selling livestock and crops, respectively, in the region.

Northeast

The Northeast had 7.3 percent of all U.S. minifarms, but minifarms accounted for 30 percent of all farms in the region. Minifarms held 14.2 percent of all Northeast land in farms, and the average farm size was 79 acres. More than 80 percent of the Northeast minifarm operators were full owners, 13 percent were part owners, and 6 percent were tenants. Nearly 95 percent of minifarm operators were sole proprietors, with 4 percent in partnerships and the remainder in corporations. Only 21 percent of Northeast minifarm operators claimed farming as their principal occupation.

Northeast minifarms supplied a minor part—1.2 percent—of the market value of agricultural product sales in the region. Almost 14 percent of all farms in the region that sold crops were minifarms, and almost 17 percent of all farms in the region that sold livestock were minifarms.

West

Minifarms accounted for 29 percent of all farms in the West. They held about half the land in all minifarms, and 17 percent of the land in all farms in the region, averaging 663 acres. Ninety-two percent of the region's minifarms were operated as sole proprietorships, 6 percent as partnerships, and 1 percent as corporations.

As in other regions, most minifarm operators (62 percent) in the West worked 200 days or more off the farm. Twenty percent of the West's minifarm operators did no off-farm work and those working 1-99 days and 100-199 days together accounted for 17 percent of the minifarm operators in the region.

Minifarmers added about 1 percent to the market value of all farm product sales in the region. Livestock contributed more sales than did crops, but fewer minifarms sold crops.

Characteristics of Minifarms in Six States

Six States were selected to show regional and commodity differences (tables 13 and 14). Tennessee was picked to examine relatively poor farms. Illinois was used to illustrate farms in the Corn Belt. Two States were chosen on the extreme edges of both the West and Northeast regions to present radically different operations; Oregon and Colorado represented western ranches, and Pennsylvania and Maine represented farms in the urban fringes and the Northeast rural area.

Weighted averages were calculated for both tenure and off-farm work, the results of which are in tables 15 and 16.⁵ Although values for tenure groups for some characteristics (such as the value of land operated, the total number of acres, and the average age) varied widely, most other characteristics were very close in value.

The weighted averages for off-farm work showed roughly the same pattern as for the entire United States. Most operators were at the extreme ends of the scale. These operators had the highest operating expenses, the highest value of land operated, and were the oldest and youngest of the operators who reported off-farm work.

The data suggest that younger operators started out with nonfarm occupations and shifted to farming as they grew older (table 17). Age and off-farm work were inversely related. As the operators spent less time at off-farm jobs, roughly between ages 40 and 50, their conception of their principal occupation changed.

Tennessee

Slightly more than one-third of all farms in Tennessee had sales less than \$2,500. These farms tended to be

⁵Averages were weighted by the item's total value for the six States to indicate frequency or relative importance of the particular item in the six States.

small, averaging 55 acres and harvesting only 7, mostly in hay. Minifarms owned 20 percent of the value of all land and buildings in the State, an average of \$53,096 per farm. Minifarms rented in 5 acres and rented out about the same amount.⁶

Cattle and hogs were the primary livestock on Tennessee minifarms, with herds averaging seven cattle and two hogs. Sales of these two livestock categories accounted for almost half of minifarm sales. Cattle sales were about four times the value of hog sales, however. Minifarms accounted for 3 percent of the total farm product sales in the State.

⁶The term "renting" refers to land that is owned by one person and operated by another. The one who owns land but does not operate it is said to "rent out." The person who operates but does not own the land is "renting in."

Production expenses for minifarms ran about 63 percent of sales. The largest expense was livestock, which ran about half of the total expenses incurred by minifarms. Crop expenses were the next highest, but only about half of livestock expenses.

The aggregate value of machinery on minifarms in Tennessee was roughly 13 percent of the value of all machinery and equipment in the State. However, their holdings in terms of vehicles were much higher.

Eighty-two percent of minifarm operators were full owners, 10 percent were part owners, and 8 percent were tenants. Full owners operated slightly more land than the State minifarm average, and they owned and

Table 13—Selected characteristics of minifarms, six States

Characteristic	Unit	Average per minifarm—					
		Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
Farms	Number	6,986	13,376	3,204	13,762	15,759	33,492
Total acres	Acres	151.2	35.7	101.0	52.9	70.8	54.8
Cropland harvested	do.	14.2	9.0	17.8	8.0	17.0	6.6
Hay harvested	do.	9.6	3.2	16.1	6.4	12.4	4.7
Cattle inventory	Head	6.0	4.6	4.2	7.5	6.2	6.9
Chicken inventory	do.	14.6	7.9	4.7	6.2	7.5	4.7
Total sales	Dollars	1,051.0	1,317.1	991.9	1,105.6	1,156.8	1,307.4
Cattle sales	do.	359.7	464.6	277.5	566.0	436.1	532.4
Operating expenses ¹	do.	2,151.2	1,299.3	1,388.6	1,647.8	1,507.1	822.8
Energy ²	do.	345.8	281.6	265.9	272.8	340.8	194.9
Livestock ³	do.	1,317.1	626.8	589.3	960.4	655.2	458.6
Crop ⁴	do.	193.0	256.9	299.0	190.5	315.4	220.8
Labor ⁵	do.	295.3	134.0	234.4	224.0	195.6	169.3
Value of land and buildings:							
Owned	do.	104,685.3	102,387.6	61,927.9	90,854.3	78,964.1	53,096.3
Rented in	do.	35,381.9	11,475.8	5,307.1	16,716.2	7,771.0	4,840.4
Rented out	do.	20,297.5	39,648.2	1,376.1	11,027.2	5,486.6	4,039.0
Operated	do.	119,769.7	74,197.2	65,858.9	96,543.3	81,248.6	53,897.8
Acres owned	Acres	132.2	49.3	95.0	49.8	68.8	54.0
Acres rented in	do.	44.7	5.5	8.1	9.2	6.8	4.9
Acres rented out	do.	25.6	19.1	2.1	6.0	4.8	4.1
Value of machinery and equipment	Dollars	7,494.1	8,706.3	8,121.1	7,035.0	8,776.2	6,439.6
Cars	Number	.7	.8	.6	.6	.8	.6
Trucks	do.	1.1	.9	.9	1.0	.8	.8
Farm machines	do.	1.2	1.6	1.6	1.0	2.5	1.1
Average age of operator	Years	48.4	48.8	48.2	48.6	51.6	51.4
Days of off-farm work:							
None	Farmers	1,476	2,403	649	2,713	3,491	9,343
1-99	do.	491	860	275	885	977	2,418
100-199	do.	729	1,126	374	1,214	1,426	2,471
200 or more	do.	4,152	8,727	1,860	8,745	9,519	18,320

See footnotes at end of table.

Continued—

Table 13—Selected characteristics of minifarms, six States—Continued

Characteristic	Unit	Average per minifarm—					
		Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
Cropland harvested as percentage of cropland	Percent	24.6	47.8	57.8	38.4	48.0	25.9
Cropland harvested as percentage of total acres	do.	9.4	25.1	17.6	15.1	24.0	12.1
Crop sales per acre of cropland harvested	Dollars	30.31	75.46	35.54	36.84	37.49	93.20
Crop sales per acre of land in farms	do.	2.85	18.91	6.27	5.52	9.01	11.31
Sales per dollar of asset value	Cents	.83	1.59	1.34	1.07	1.28	2.17
Total sales per acre	Dollars	6.95	36.89	9.82	20.90	16.34	23.86
Crop sales as percentage of total sales	Percent	41.0	51.3	63.9	26.4	55.2	47.4
Livestock sales as percentage of total sales	do.	59.0	48.7	36.1	73.6	44.8	52.6
Value of land and buildings per dollar of sales	Dollars	113.96	56.33	66.40	87.32	70.24	41.22
Value of land and buildings per acre	do.	792.13	2,078.35	652.07	1,894.58	1,147.58	983.54
Value of machinery and equipment per dollar of sales	do.	7.13	6.61	8.19	6.36	7.59	4.93
Value of machinery and equipment per acre	do.	49.56	243.87	80.41	132.98	123.96	117.51
Total operating expenses per dollar of sales	do.	2.05	.99	1.40	1.49	1.30	.63
Operators working days off-farm as percentage of all operators:							
None	Percent	21.1	18.0	20.2	19.8	22.2	27.9
1-99	do.	7.0	6.4	8.6	6.4	6.2	7.2
100-199	do.	10.4	8.4	11.7	8.2	9.1	7.4
200 or more	do.	59.4	65.2	58.1	63.5	60.4	54.7

¹Sum of energy, livestock, crop, and labor expenses.

²Includes gasoline for farm business; diesel fuel for farm business; LP gas, butane, propane for farm business; fuel oil for farm business; natural gas for farm business; kerosene, motor oil, grease for farm business; electricity for farm business; and other (coal, wood, coke, etc.).

³Includes livestock and poultry purchased, total feed purchased for livestock and poultry, and animal health costs for livestock and poultry.

⁴Includes seeds, bulbs, plants, trees, and fertilizer purchased—all forms, including rock phosphate and gypsum; and agricultural chemicals purchased—insecticides, herbicides, fungicides, other pesticides, lime, etc.

⁵Includes hired labor, machinery hire, customwork, and contract labor.

rented out a higher value of land and buildings than other tenure groups.

Most Tennessee minifarm operators worked 200 days or more off the farm, but those who worked 100-199 days off the farm ranked highest in most characteristics studied. Although this group had the second-fewest number of operators, they owned, operated, and harvested the most land and had the highest value of machinery and equipment.

Illinois

Only about 12 percent of farms in Illinois fell into the minifarm category. They tended to be small operations

averaging 36 acres, with an average value of \$74,197. Only 9 of these acres were harvested cropland, divided up fairly evenly between hay, soybeans, and corn.

Cattle were the primary livestock in Illinois. The average herd size was small; Illinois minifarm operators held only 2.3 percent of all the cattle in the State. They also raised a few chickens which were probably consumed on the farm. Minifarms averaged 4.6 cattle and 7.9 chickens.

Average value of all Illinois minifarm product sales was \$1,317 per farm. Minifarms accounted for only 0.3 percent of all farm product sales in Illinois; cattle contributed about 35 percent of these sales.

Total operating expenses for the average Illinois minifarm were only slightly lower than sales. Livestock expenses accounted for more than half the total expense. Energy expenses were about half the value of livestock expenses. Crop expenses were less than energy expenses, and labor costs were about 52 percent of crop expenditures. Operating expenses for minifarms were only 0.7 percent of total operating expenses incurred by all farms in Illinois.

Average value of machinery and equipment in Illinois was much higher than in most other States studied. Illinois minifarms had 2.1 percent of the value of all machinery in the State, averaging \$8,706 per farm. Illinois minifarmers also owned 8 percent of all cars on farms in the State, almost 10 percent of all trucks, and 4 percent of all farm machinery.

Tenure patterns for Illinois differed somewhat from both other States studied and from the Nation. Most minifarmers (82 percent) were full owners, but there were more tenants (10 percent) than part owners (8 percent).

Illinois minifarmers had much the same off-farm work patterns as did those elsewhere. The majority worked more than 200 days off the farm, and the fewest worked 1-99 days off the farm.

Oregon

Oregon had the highest proportion of minifarms of all the States studied, nearly 40 percent of all farms in the State. These minifarms, however, held only 4 percent of the land in farms, contributed 1 percent of sales,

Table 14—Characteristics of minifarms as a percentage of all farms in six States

Characteristic	Minifarms as percentage of all farms in—					
	Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
	<i>Percent</i>					
Farms	23.6	12.2	39.3	39.7	26.3	34.5
Total acres	3.0	1.6	20.1	4.0	12.8	14.0
Cropland harvested	1.7	.5	11.7	3.4	6.2	5.0
Hay harvested	4.6	3.6	20.4	8.2	9.7	13.2
Cattle inventory	1.3	2.3	10.0	6.4	5.6	10.9
Chicken inventory	3.2	1.4	1.6	2.7	.7	3.2
Total sales	.3	.3	.8	1.2	.8	3.1
Cattle sales	.1	.8	5.8	2.2	2.3	5.5
Operating expenses ¹	.7	.7	1.6	3.1	2.0	4.8
Energy ²	2.1	1.1	4.4	5.2	4.2	8.0
Livestock ³	.5	.9	1.0	4.0	1.5	4.3
Crop ⁴	1.0	.3	2.7	1.9	2.5	3.9
Labor ⁵	1.3	.6	1.7	1.7	1.5	5.1
Value of land and buildings:						
Owned	9.5	5.0	26.1	18.2	14.7	20.4
Rented in	5.7	.5	15.0	7.5	4.0	5.2
Rented out	24.6	16.1	40.2	37.5	24.8	23.7
Operated	7.3	.3	15.6	14.3	11.5	16.0
Acres owned	3.9	4.5	21.5	5.2	16.3	17.8
Acres rented in	2.3	.4	12.3	2.0	4.5	4.5
Acres rented out	10.0	14.4	33.2	10.3	27.6	20.7
Value of machinery and equipment	4.8	2.1	11.9	9.9	7.8	13.2
Cars	15.9	8.2	30.4	27.7	20.6	27.9
Trucks	11.5	9.9	21.7	22.6	18.1	25.6
Farm machines	8.6	4.4	23.7	18.3	14.5	18.0
Days of off-farm work:						
None	11.9	4.8	20.8	23.5	15.0	28.7
1-99	13.1	5.8	29.5	26.2	16.2	27.6
100-199	27.4	14.7	43.9	37.6	27.5	33.4
200 or more	43.9	26.8	62.4	56.7	41.8	41.8

See footnotes, table 13.

accumulated 2 percent of production expenses, and owned 8 percent of the value of all machinery and equipment.

Minifarms accounted for 17 percent of all owned land in the State, however, renting in only 6 percent, renting out almost 20 percent, and operating 13 percent of all land operated. The value of machinery and equipment was also low, but number of vehicles held was fairly high.

Minifarms in Oregon averaged 83 acres, with a value of \$53,103. On these 83 acres, an average of only 8 acres were harvested cropland, 6.3 acres of which were harvested in hay.

In the aggregate, minifarms in the State held over \$97 million worth of machinery and equipment, averaging \$7,035 per farm. On a per farm basis, these farms had an equal number of trucks and farm machines, and they had about half as many cars as trucks.

Cattle were the primary livestock on minifarms in Oregon, accounting for a little over half the value of sales for these farms. Chickens were also raised, but the chickens and eggs were probably consumed on the farm, since the flocks were relatively small.

Table 15—Selected characteristics of minifarm operators by tenure status, six States, weighted averages

Characteristic	Unit	Tenant	Part owner	Full owner
Farms	Number	6,417	8,885	71,372
Total acres	Acres	83.9	154.1	63.6
Cropland				
harvested	do.	9.8	15.2	9.5
Hay harvested	do.	4.9	10.0	6.6
Cattle inventory	Head	4.5	7.6	6.6
Chicken inventory ¹	do.	12.1	7.2	14.2
Total sales	Dollars	1,203.2	1,194.1	1,217.3
Acres owned ²	Acres	0	90.0	73.8
Acres rented in ²	do.	84.8	65.8	.3
Acres rented out ²	do.	.9 ³	1.8	10.4
Value of machinery and equipment	Dollars	3,072.1	3,290.2	2,959.6
Cars	Number	.2	.2	.2
Trucks	do.	.5	.4	.3
Farm machines	do.	.5	.7	.5
Average age of operator	Years	38.8	46.1	51.8

¹Excludes Tennessee.

²Due to sampling techniques, figures for Colorado and Oregon are low, making the weighted average low.

³Excludes Maine.

Operating expenses were high. Total operating expenses equaled about 150 percent of farm product sales. The largest expense, for livestock, far exceeded the amount received for cattle sales. Energy was the second highest expense, followed by labor and crops.

Most operators in Oregon (84 percent) were full owners, 9 percent were part owners, and 7 percent were tenants. All but 20 percent of the minifarm operators reported some off-farm work. Most operators (63 percent) spent 200 or more days off the farm per year.

Colorado

Almost 25 percent of all farms in Colorado were minifarms. Major commodities raised by these farms were cattle (primarily beef cattle) and dry hay (primarily alfalfa).

Colorado minifarms were larger than those in other States studied, averaging 151 acres per farm, but very little of this land was harvested. Most of the land in these farms was owned by the operator.

Minifarmers in Colorado held much less machinery than did minifarmers in most other States studied, with only 5 percent of the value of machinery and equipment on all Colorado farms.

Livestock and poultry were important to Colorado's minifarmers, averaging 6 cattle per farm, 2 hogs, and 15 chickens. Livestock were not as important as in other States because they contributed a smaller portion of total farm product sales.

Operating expenses were twice the value of farm product sales by Colorado minifarmers. Again, livestock was the largest single expense (61 percent of total expenses) followed by energy, labor, and crop expenses.

Most of Colorado's minifarm operators were full owners (78 percent), while 12 percent were part owners, and 10 percent were tenants. Most minifarmers worked off the farm 200 days or more during the year; farmers in this group were also the youngest of any of the off-farm work groups. The next largest group, about one-fifth of the operators, reported no off-farm work; they were the oldest of the off-farm categories.

Pennsylvania

Slightly more than 25 percent of all the farms in Pennsylvania had less than \$2,500 of sales, mostly of cattle and hay. The average size was 71 acres per farm—representing about 13 percent of all farmland in the State—but only 17 acres, on the average, was harvested. Most of the land in these farms were owned by its operator, at a value of \$78,964.

Pennsylvania minifarmers owned a little over \$138 million in machinery and equipment, or about 8 percent of all machinery in the State. These farmers had 21 percent of all the farmer-owned cars in the State, 18 percent of all the trucks, and 14 percent of all the farm machines.

Average minifarm herd size was 6 cattle, with 8 chickens on these farms as well. Cattle sales were 38

Table 16—Selected characteristics of minifarm operators by number of days worked off-farm, six States, weighted averages

Characteristic	Unit	Days worked off-farm per operator			
		None	1-99	100-199	200 or more
Farms	Number	20,123	5,908	7,346	51,361
Total acres	Acres	109.4	76.2	78.6	59.3
Cropland harvested	do.	10.2	11.4	11.6	9.7
Hay harvested	do.	6.8	7.7	8.0	6.5
Cattle inventory	Head	6.7	6.2	6.6	6.1
Chicken inventory ¹	do.	8.7	10.1	8.2	16.0
Total sales	Dollars	1,266.4	1,239.3	1,189.1	1,193.7
Acres owned ²	Acres	98.5	75.0	81.8	55.6
Acres rented in ²	do.	23.4	9.8	13.0	9.9
Acres rented out ²	do.	12.4	8.7	16.1	6.2
Value of machinery and equipment	Dollars	2,828.2	4,823.4	2,807.7	2,940.8
Cars	Number	.2	.2	.2	.2
Trucks	do.	.3	.3	.3	.4
Farm machines	do.	.5	.6	.6	.5
Average age of operator	Years	63.0	54.0	48.8	44.6

¹Excludes Tennessee.

²Due to sampling techniques, figures for Colorado and Oregon were low, making the weighted average low.

Table 17—Number of minifarm operators, by age and principal occupation, six States

Age and principal occupation	Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee	U.S. total
<i>Number</i>							
Farming:							
Under 25 years	50	109	26	55	50	167	3,691
25-34 years	163	140	55	226	140	374	8,149
35-44 years	145	186	71	239	303	671	10,332
45-54 years	238	244	103	386	326	791	17,126
55-64 years	364	410	137	622	805	2,082	30,402
65 years or older	538	1,102	230	1,327	1,683	4,244	65,549
Other than farming:							
Under 25 years	119	259	11	142	173	813	11,840
25-34 years	1,011	2,098	493	2,133	1,524	3,855	68,191
35-44 years	1,445	3,065	636	3,102	3,070	6,152	120,121
45-54 years	1,314	2,417	754	2,741	3,444	5,752	121,970
55-64 years	1,143	2,127	489	1,902	2,928	5,310	98,755
65 years or older	456	1,219	199	887	1,313	3,281	55,527

percent of all farm products sold by these farms, or \$436 of the total average sales per farm of \$1,157.

Minifarm operators in Pennsylvania had lower total operating expenses than in some other States studied, although their total operating expenses were higher than sales. Of the four expense items identified, the largest was livestock (43 percent of the total), followed by energy, crop, and labor charges.

Most minifarm operators in Pennsylvania were full owners—some 84 percent—while 12 percent were part owners, and 4 percent were tenants. Some 60 percent of Pennsylvania minifarm operators worked 200 days or more off the farm, while 22 percent reported no off-farm work.

Maine

Maine had the second largest (almost 40 percent) concentration of minifarms of the States studied. Minifarms accounted for 20 percent of all farmland in Maine, 26 percent of the value of all owned land, 40 percent of the value of land rentals, 22 percent of all acres owned, and 33 percent of all land rented out. Very little land in minifarms was harvested, mostly in hay. Minifarm operators harvested slightly less than 20 percent of all harvested hay in the State. Various berries were also raised. While berry acreages were relatively small, small amounts of berries tend to generate significant incomes.

Maine's minifarmers raised primarily cattle and chickens, with some hogs. They generally had more chickens than cattle. Even though the average minifarm had only one hog, these farms held 38.4 percent of all hogs in the State. Livestock contributed about 28 percent of all farm product sales by minifarms. Cattle accounted for the largest share of these sales by far, but hogs contributed a small portion.

Livestock was the largest single operating expense, which was almost half the total expenses, followed by crop, labor, and energy expenses. Together, these expenses accounted for 140 percent of total farm product sales.

Maine's minifarm operators held about 12 percent of the value of machinery and equipment in the State, 30 percent of all cars on farms, 22 percent of the trucks, and 24 percent of the farm machines.

Most (82 percent) of Maine's minifarm operators were full owners. Only 14 percent of the operators were part owners, and the remaining 4 percent were tenants. Most of the operators worked 200 days or more off the farm. The next largest group—one-third the size of the previous group—reported no off-farm work.

References

1. Hatch, Thomas C. *The Census Typical Farm Program User Guide and Documentation*. Economic Research Service, U.S. Department of Agriculture. ERS Staff Report No. AGES811230. February 1982.
2. U.S. Department of Agriculture, Economic Research Service, National Economics Division. *Economic Indicators of the Farm Sector: Income and Balance Sheet Statistics, 1982*. ECIFS 2-2. October 1983.
3. U.S. Department of Commerce, Bureau of the Census. *Census of Agriculture, 1978*. Vol. I. Parts 6, 13, 19, 37, 38, 42, 51. July 1981.
4. _____. *Census of Agriculture, 1978*. Vol. 5: *Special Reports*. Part 6: "1979 Farm Finance Survey." 1982.

Appendix table 1—Selected characteristics of small farms, six States

Characteristic	Unit	Average per small farm in—					
		Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
Cropland harvested as percentage of cropland	Percent	45.5	77.7	65.3	50.0	65.9	41.1
Cropland harvested as percentage of total acres	do.	16.7	55.9	22.1	17.8	40.3	22.2
Crop sales per acre of cropland harvested	Dollars	46.20	113.39	71.50	112.81	87.56	117.78
Crop sales per acre of land in farms	do.	7.71	63.38	15.80	20.07	35.28	26.20
Sales per dollar of asset value	Cents	3.87	5.64	7.31	4.02	5.62	6.89
Total sales per acre	Dollars	17.66	93.47	43.50	43.52	70.51	64.17
Crop sales as percentage of total sales	Percent	43.7	67.8	36.3	46.1	50.0	40.8
Livestock sales as percentage of total sales	do.	56.3	32.2	63.7	53.9	50.0	59.2
Value of land and buildings per dollar of sales	Dollars	23.76	15.73	11.51	22.72	15.32	12.68
Value of land and buildings per acre	do.	419.64	1,470.10	500.85	988.56	1,080.49	813.96
Value of machinery and equipment per dollar of sales	do.	2.05	2.00	2.17	2.14	2.47	1.83
Value of machinery and equipment per acre	do.	36.14	187.34	94.34	93.12	173.37	117.33
Total operating expenses per dollar of sales	do.	.65	.53	.86	.90	.70	.47
Operators working days off-farm as percentage of all operators							
None	Percent	32.7	30.0	31.3	27.8	27.7	31.6
1–99	do.	12.5	9.6	13.1	10.7	8.6	9.1
100–199	do.	11.5	8.9	13.6	12.2	11.4	8.2
200 or more	do.	38.6	46.7	38.0	45.7	47.8	45.7
Farms	Number	10,510	34,751	2,254	12,239	23,023	50,098
Total acres	Acres	490.8	99.8	172.1	171.4	111.5	110.3
Cropland harvested	do.	81.9	55.8	38.0	30.5	67.9	24.5
Hay harvested	do.	27.9	6.8	27.4	17.9	24.4	12.0
Cattle inventory	Head	25.6	9.9	8.1	21.0	12.9	19.4
Chicken inventory	do.	6.5	5.8	¹	4.3	¹	4.3
Total sales	Dollars	8,668.1	9,328.9	7,485.4	7,460.5	7,829.6	7,079.4
Cattle sales	do.	3,720.8	1,605.1	1,301.7	3,157.0	2,092.7	2,697.3
Operating expenses ²	do.	5,603.7	5,519.8	4,508.8	4,842.8	4,485.6	3,289.3
Energy ³	do.	1,266.3	1,044.3	946.3	849.8	922.5	543.5
Livestock ⁴	do.	2,611.7	1,434.0	1,228.9	2,207.9	1,741.2	1,348.3
Crop ⁵	do.	832.7	1,940.9	1,435.2	921.0	1,313.6	941.3
Labor ⁶	do.	893.0	570.3	898.4	864.1	508.3	456.2
Value of land and buildings:							
Owned	do.	146,622.2	123,782.4	78,733.6	148,877.1	103,753.1	80,230.8
Rented in	do.	79,174.0	48,954.3	7,462.7 ⁷	2,606.9	21,633.2	15,546.3
Rented out	do.	19,807.0	26,020.8	NA	22,044.9	5,489.0	5,981.5
Operated	do.	205,989.2	146,715.9	86,196.3	169,439.1	119,897.3	89,795.6
Acres owned	Acres	349.4	84.2	157.2	150.6	96.4	98.6
Acres rented in	do.	188.7	33.3	14.9 ⁷	43.1	20.1	19.1
Acres rented out	do.	47.2	17.7	NA	22.3	5.1	7.3
Land value per acre	Dollars	419.64	1,470.10	500.85	988.56	1,076.28	813.96
Value of machinery and equipment	do.	17,740.2	18,698.1	16,232.5	15,963.9	19,326.8	12,944.2
Cars	Number	1.0	1.0	.8	.9	.9	.8
Trucks	do.	1.6	1.0	1.4	1.4	1.0	1.0
Farm machines	do.	2.5	3.1	2.0	2.0	4.0	2.0
Average age of operator	Years	50.6	50.1	51.0	51.6	52.0	52.9
Days of off-farm work:	Number						
None	of farms	3,437	10,431	706	3,407	6,380	15,854
1–99	do.	1,314	3,326	295	1,315	1,985	4,566
100–199	do.	1,204	3,102	307	1,493	2,626	4,096
200 or more	do.	4,053	16,240	857	5,591	11,014	22,908

NA=Not available. ¹Value not disclosed to ensure privacy. ²Sum of energy, livestock, crop, and labor expenses. ³Includes gasoline for the farm business; diesel fuel for the farm business; LP gas, butane, propane for the farm business; fuel oil for the farm business; natural gas for the farm business; kerosene, motor oil, grease for the farm business; electricity for the farm business; and other (coal, wood, coke, etc.) ⁴Includes livestock and poultry purchased, total feed purchased for livestock and poultry, and animal health costs for livestock and poultry. ⁵Includes seeds, bulbs, plants, trees, and fertilizer purchased—all forms, including rock phosphate and gypsum; and agricultural chemicals purchased—insecticides, herbicides, fungicides, other pesticides, lime, etc. ⁶Includes hired labor, machinery hire, customwork, and contract labor. ⁷Net of land rented.

Appendix table 2—Selected characteristics of large farms, six States

Characteristic	Unit	Average per large farm in—					
		Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
Cropland harvested as percentage of cropland	Percent	58.5	92.0	75.2	58.0	82.5	73.2
Cropland harvested as percentage of total acres	do.	17.7	80.6	38.7	18.8	60.4	52.6
Crop sales per acre of cropland harvested	Dollars	108.53	177.44	281.56	234.03	179.66	160.15
Crop sales per acre of land in farms	do.	19.20	142.96	109.04	43.90	108.47	84.28
Sales per dollar of asset value	Cents	27.40	10.32	60.74	18.42	23.99	17.74
Total sales per acre	Dollars	89.85	217.01	976.22	79.01	395.16	178.17
Crop sales as percentage of total sales	Percent	21.4	65.9	25.6	55.6	27.5	47.3
Livestock sales as percentage of total sales	do.	78.6	34.1	74.4	44.4	72.5	52.7
Value of land and buildings per dollar of sales	Dollars	3.31	8.84	1.24	4.85	3.57	4.88
Value of land and buildings per acre	do.	297.40	1,919.40	526.17	383.06	1,412.23	870.17
Value of machinery and equipment per dollar of sales	do.	.34	.84	.41	.58	.59	.75
Value of machinery and equipment per acre	do.	30.48	182.62	174.67	45.96	234.90	134.04
Total operating expenses per dollar of sales	do.	.70	.42	.69	.54	.54	.52
Operators working days off-farms as percentage of all operators:							
None	Percent	61.8	59.4	65.4	62.8	63.4	55.1
1-99	do.	16.2	17.3	13.4	13.7	14.5	13.2
100-199	do.	6.0	5.6	6.3	6.1	5.4	6.2
200 or more	do.	10.2	12.2	9.6	12.4	10.5	19.6

Appendix table 3—Small farms as percentage of all farms in State, six States

Characteristic	Colorado	Illinois	Maine	Oregon	Pennsylvania	Tennessee
<i>Percent</i>						
Farms	35.5	31.6	27.6	35.3	38.4	51.6
Total acres	14.5	11.7	24.2	11.4	29.3	42.0
Cropland harvested	14.6	8.5	17.6	11.4	36.0	27.4
Hay harvested	20.4	19.8	24.4	2.1	28.0	50.5
Cattle inventory	8.5	13.1	13.7	16.1	17.1	45.7
Chicken inventory	2.1	2.6	1	1.7	1	4.4
Total sales	3.5	5.5	4.2	7.1	8.2	27.5
Cattle sales	2.3	6.9	19.0	10.7	16.1	42.0
Operating expenses ²	3.2	7.6	3.6	8.2	8.5	22.4
Energy ³	11.5	10.0	10.9	14.4	16.5	33.2
Livestock ⁴	1.9	5.4	1.5	8.2	59.5	19.1
Crop ⁵	6.8	6.8	9.1	8.1	15.5	25.0
Labor ⁶	6.0	7.1	4.6	5.8	5.5	20.7
Value of land and buildings:						
Owned	20.0	15.8	23.4	27.7	28.2	46.0
Rented in	19.3	5.4	14.9 ⁷	16.9	16.5	24.8
Rented out	36.2	27.5	NA	66.7	36.3	52.4
Operated	19.0	1.7	22.0	22.4	24.8	39.8
Acres owned	15.4	20.0	25.0	14.1	33.4	48.6
Acres rented in	14.8	6.9	17.6 ⁷	8.6	19.5	26.2
Acres rented out	27.7	34.7	NA	34.0	42.9	55.0
Value of machinery and equipment	17.1	11.9	16.7	19.9	25.2	39.6
Cars	32.7	27.8	26.3	37.9	35.2	54.3
Trucks	25.3	22.4	23.4	28.2	48.6	47.9
Farm machines	27.8	21.7	20.5	31.0	17.2	49.3
Days of off-farm work:						
None	27.7	21.1	22.6	29.5	27.4	48.6
1-99	34.9	22.3	31.6	38.9	33.0	52.2
100-199	45.2	40.4	36.1	46.2	50.6	55.3
200 or more	42.8	49.9	28.8	36.3	48.4	52.2

See footnotes, appendix table 1, p. 16.

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